

Richmond Refinery LPS Alert - Reliability H2 Recycle Compressor Trip - 9/26/2010



IPS Control: 2036930

Location: Richmond

Contact Information:

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Power Supply



¾ amp slow blow fuse
incorrectly inserted here

**Always remember to do
your LPSA – because
we care about you!**

Incident Description:

4 Rheniformer H2 Recycle Compressor (K-3550) tripped off line. Operations responded and found the Trisen speed controller had no power on the panel.

Immediate Actions Taken:

Operators made notifications, chopped furnaces, pulled feed, and depressurized the reactor loop without causing any environmental issues. The DHT slumped due to loss of hydrogen and it was routed off test. In addition, 5 cat feed was increased to partially mitigate the loss of 4 cat.

Process control was called and consulted. Electrician and instrument personnel were called out to troubleshoot. They found that a 3/4 Amp fuse had blown on the Trisen inlet power, which should have been a 5 Amp fuse. The fuse was replaced with the proper 5 Amp fuse and Operations started preparing the plant for restart.

K-3550 was brought back up to a slow roll two hours after it had tripped. Feed was re-introduced to the plant seven hours after the compressor tripped.

An investigation into the source and cause of the incorrectly sized fuse is underway.

Background Information

There are 2 power supplies that are used for Trisen TS-310 speed controllers. The first one uses an AC power source that requires a ¾ amp slow blow fuse. The second one is a special battery backup power supply, 24 Vdc, that requires a 5 amp slow blow fuse (this kind of power supply was the one in service, except that it had a 3/4 Amp fuse in it). The Trisen inlet power module is purchased prefabricated by the manufacturer.

Immediate Recommendations

Compressors with Trisen power supplies in service may be at risk for a similar type of failure. All sites should determine if any of their compressors are at risk and check the fuses in the Trisen power supplies for those compressors. Contingency plans for a similar type of failure should be developed if the compressor power supply fuse can not be checked without affecting plant rates.

LOSS PREVENTION SELF-ASSESSMENT

BEFORE BEGINNING ANY ACTIVITY/TASK/JOB, AFTER A LOSS OR NEAR LOSS, ANY UNUSUAL CIRCUMSTANCES:

ASSESS the risk!
What could go wrong?
What is the worst thing that could happen if something does go wrong?

ANALYZE how to reduce the risk!
Do I have all the necessary Training and Knowledge to do this job properly?
Do I have all the proper Tools and Personal Protective Equipment?

ACT to ensure loss-free operations!
Take necessary Action to ensure the job is done properly!
Follow written procedures! Ask for assistance, if needed!

DO NOT PROCEED UNLESS ALL RISKS HAVE BEEN ADDRESSED!
For Everyone • Every Day • All the Time

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